HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Trace Analysis, Inc.

Certificate of Analysis Number:

09081243

Report To:		Project Name:	9082112, 9082113, 9082424, 9082425, 90
Trace Analysis, Inc.		Site:	Lubbock, TX
Liz Givens		Site Address:	
6701 Aberdeen Avenue			
Suite 9		PO Number:	
Lubbock		State:	Texas
TX		State Cert. No.:	T104704205-06-TX
79424-		Date Reported:	9/2/2009
ph: (806) 794-1296	fax:		

This Report Contains A Total Of 12 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

9/3/2009

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Trace Analysis, Inc.

Certificate of Analysis Number:

09081243

Report To:		Project Name:	9082112, 9082113, 9082424, 9082425, 90
Trace Analysis, Inc.		Site:	Lubbock, TX
Liz Givens		Site Address:	
6701 Aberdeen Avenue			
Suite 9		PO Number:	
Lubbock		State:	Texas
TX		State Cert. No.:	T104704205-06-TX
79424-		Date Reported:	9/2/2009
ph: (806) 794-1296	fax:		

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II: ANALYSES AND EXCEPTIONS:

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID: 93278 for the Chlorinated Herbicides analysis by Method 8151A. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

III. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg\kg-dry " or " ug\kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

Erica Cardenas

9/3/2009

Erica Cardenas
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Trace Analysis, Inc.

Certificate of Analysis Number:

09081243

Report To:	Trace Analysis, Inc. Liz Givens 6701 Aberdeen Avenue Suite 9 Lubbock TX 79424- ph: (806) 794-1296 fax: (806) 794-1298	**Project Name:**	9082112, 9082113, 9082424, 9082425, 90
		Site:	Lubbock, TX
		Site Address:	
		PO Number:	
		State:	Texas
		State Cert. No.:	T104704205-06-TX
Fax To:		**Date Reported:**	9/2/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
207065	09081243-01	Water	8/19/2009 10:17:00 AM	8/25/2009 9:00:00 AM		
207066	09081243-02	Water	8/19/2009 1:05:00 PM	8/25/2009 9:00:00 AM		
207441	09081243-03	Water	8/20/2009 9:58:00 AM	8/25/2009 9:00:00 AM		
207442	09081243-04	Water	8/21/2009 1:40:00 PM	8/25/2009 9:00:00 AM		
207443	09081243-05	Water	8/20/2009 9:58:00 AM	8/25/2009 9:00:00 AM		
207473	09081243-06	Water	8/20/2009 12:54:00 PM	8/25/2009 9:00:00 AM		

Erica Cardenas
Project Manager

9/3/2009
Date

Kesavalu M. Bagawandoss Ph.D., J.D.
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: 207066 **Collected:** 08/19/2009 13:05 **SPL Sample ID:** 09081243-02

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORINATED HERBICIDES BY METHOD 8151A				**MCL**	**SW8151A**	**Units: ug/L**		
2,4,5-T	ND		1		1	08/31/09 16:03	RLR	5185141
2,4,5-TP (Silvex)	ND		1		1	08/31/09 16:03	RLR	5185141
2,4-D	ND		1		1	08/31/09 16:03	RLR	5185141
2,4-DB	ND		1		1	08/31/09 16:03	RLR	5185141
Dicamba	ND		1		1	08/31/09 16:03	RLR	5185141
Dichloroprop	ND		1		1	08/31/09 16:03	RLR	5185141
Dinoseb	ND		1		1	08/31/09 16:03	RLR	5185141
MCPA	ND		25		1	08/31/09 16:03	RLR	5185141
MCPP	ND		25		1	08/31/09 16:03	RLR	5185141
Surr: DCAA	88.1		% 18-176		1	08/31/09 16:03	RLR	5185141

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	08/26/2009 11:44	N_M	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Trace Analysis, Inc.

9082112, 9082113, 9082424, 9082425, 9082426,908249

Analysis: Chlorinated Herbicides by Method 8151A **WorkOrder:** 09081243
Method: SW8151A **Lab Batch ID:** 93278

Method Blank

RunID: HP_9_090831B-5185139 Units: ug/L
Analysis Date: 08/31/2009 14:46 Analyst: RLR
Preparation Date: 08/26/2009 11:44 Prep By: N_M Method: SW3510C

Analyte	Result	Rep Limit
2,4,5-T	ND	1.0
2,4,5-TP (Silvex)	ND	1.0
2,4-D	ND	1.0
2,4-DB	ND	1.0
Dicamba	ND	1.0
Dichloroprop	ND	1.0
Dinoseb	ND	1.0
MCPA	ND	25
MCPP	ND	25
Surr: DCAA	83.7	18-176

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09081243-01A	207065
09081243-02A	207066
09081243-03A	207441
09081243-04A	207442
09081243-05A	207443
09081243-06A	207473

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_9_090831B-5185137 Units: ug/L
Analysis Date: 08/31/2009 14:08 Analyst: RLR
Preparation Date: 08/26/2009 11:44 Prep By: N_M Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
2,4,5-T	2.00	1.70	84.8	2.00	1.71	85.3	0.6	48	20	165
2,4,5-TP (Silvex)	2.00	2.09	104	2.00	2.10	105	0.6	49	25	158
2,4-D	2.00	1.74	86.9	2.00	1.74	86.8	0.1	48	10	170
2,4-DB	2.00	1.92	96.1	2.00	1.73	86.6	10.4	56	10	203
Dicamba	2.00	2.08	104	2.00	1.99	99.5	4.6	56	14	174
Dichloroprop	2.00	2.03	101	2.00	2.07	104	2.1	65	32	180
Dinoseb	2.00	1.47	73.5	2.00	1.46	73.0	0.7	46	10	130
MCPA	200	161	80.3	200	162	80.9	0.7	57	17	130
MCPP	200	173	86.6	200	171	85.3	1.5	32	13	132
Surr: DCAA	2.00	2.19	109	2.00	2.16	108	1.3	30	18	176

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	09081243	Received By:	L_D
Date and Time Received:	8/25/2009 9:00:00 AM	Carrier name:	Fedex-Priority
Temperature:	5.0°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present ☐
2.	Custody seals intact on shippping container/cooler?	Yes	☑	No	☐	Not Present ☐
3.	Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present ☑
4.	Chain of custody present?	Yes	☑	No	☐	
5.	Chain of custody signed when relinquished and received?	Yes	☑	No	☐	
6.	Chain of custody agrees with sample labels?	Yes	☑	No	☐	
7.	Samples in proper container/bottle?	Yes	☑	No	☐	
8.	Sample containers intact?	Yes	☐	No	☑	
9.	Sufficient sample volume for indicated test?	Yes	☐	No	☑	
10.	All samples received within holding time?	Yes	☐	No	☑	
11.	Container/Temp Blank temperature in compliance?	Yes	☐	No	☑	
12.	Water - VOA vials have zero headspace?	Yes	☐	No	☐	VOA Vials Not Present ☑
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes	☐	No	☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:

TraceAnalysis - MID

SPECIFIC CONDUCTANCE WORKSHEET

PB # 539131 EPA METHOD 120.1 Tech ID: ARoss

QC # 63186 Analysis Date: 9.2.09

SAMPLE NUMBER	MATRIX S	MATRIX W	us	TEMP °C	DILUTION	SPECIFIC CONDUCTANCE uMHOs/cm
ICV		W	1400	22.4	1	1473
BLANK			23.36	22.9	1	24.3
208750			820.5	17.9	1	
751			838.2	18.9	1	
208918			5250	19.3	1	5892
209007			4104	17.7	1	
008			1566	17.7	1	
009			2731	17.1	1	
209016		↓	~~1415~~ 1845 AR 9.2.09	22.2	1	1949
AR 9.2.09						
208918 D		W	5354	19.3	1	6008
CCV		W	1395	22.6	1	1462

RPD = 1.9

ICV %IA = 105

CCV %IA = 104

ICV CONC.= 0.01 M KCl = 1409 uMHOs/cm @ 25°C

CCV CONC.= 0.01 M KCl = 1412 uMHOs/cm @ 25°C

ICV Standard ID TV1013P5WC080320R1

CCV Standard ID 075071

EC (@ 25°C) = EC (@ Temp °C) * F F = Temperature Factor

TEMPERATURE FACTORS

°C	F	°C	F	°C	F	°C	F	°C	F	°C	F
16.0	1.2076	18.0	1.1543	20.0	1.1056	22.0	1.0608	24.0	1.0195	26.0	0.9813
16.1	1.2048	18.1	1.1518	20.1	1.1033	22.1	1.0586	24.1	1.0175	26.1	0.9794
16.2	1.2020	18.2	1.1493	20.2	1.1009	22.2	1.0565	24.2	1.0155	26.2	0.9776
16.3	1.1993	18.3	1.1467	20.3	1.0986	22.3	1.0544	24.3	1.0136	26.3	0.9758
16.4	1.1965	18.4	1.1442	20.4	1.0963	22.4	1.0523	24.4	1.0116	26.4	0.9740
16.5	1.1938	18.5	1.1417	20.5	1.0940	22.5	1.0501	24.5	1.0096	26.5	0.9721
16.6	1.1911	18.6	1.1393	20.6	1.0916	22.6	1.0480	24.6	1.0077	26.6	0.9703
16.7	1.1884	18.7	1.1368	20.7	1.0895	22.7	1.0459	24.7	1.0058	26.7	0.9686
16.8	1.1857	18.8	1.1343	20.8	1.0872	22.8	1.0439	24.8	1.0038	26.8	0.9668
16.9	1.1830	18.9	1.1319	20.9	1.0850	22.9	1.0418	24.9	1.0019	26.9	0.9650
17.0	1.1804	19.0	1.1294	21.0	1.0827	23.0	1.0397	25.0	1.0000	27.0	0.9632
17.1	1.1777	19.1	1.1270	21.1	1.0805	23.1	1.0377	25.1	0.9981	27.1	0.9614
17.2	1.1751	19.2	1.1246	21.2	1.0783	23.2	1.0356	25.2	0.9962	27.2	0.9597
17.3	1.1724	19.3	1.1222	21.3	1.0760	23.3	1.0336	25.3	0.9943	27.3	0.9579
17.4	1.1698	19.4	1.1198	21.4	1.0738	23.4	1.0315	25.4	0.9924	27.4	0.9562
17.5	1.1672	19.5	1.1174	21.5	1.0716	23.5	1.0295	25.5	0.9905	27.5	0.9544
17.6	1.1646	19.6	1.1150	21.6	1.0695	23.6	1.0275	25.6	0.9887	27.6	0.9527
17.7	1.1620	19.7	1.1126	21.7	1.0673	23.7	1.0255	25.7	0.9868	27.7	0.9510
17.8	1.1594	19.8	1.1103	21.8	1.0651	23.8	1.0235	25.8	0.9849	27.8	0.9492
17.9	1.1568	19.9	1.1079	21.9	1.0629	23.9	1.0215	25.9	0.9831	27.9	0.9475